

manufactured at a comparatively low cost, and will effect the removal of the wooden sheathing of the lead and the pointing of the latter without waste and without soiling the fingers, clothing, or surroundings of the person sharpening the pencil; and owing to the fact that the knife *g* and disk *F* are inexpensive, and can be readily removed and replaced by new ones when worn out, the instrument can be kept in effective working order without trouble and at slight expense.

If desired, friction, belt, or spur gearing may be used in order to drive the shaft *f* at a higher rate of speed than is possible when the crank is connected directly thereto. An arrangement of this character is shown in Fig. 7.

I claim as my invention—

1. The combination, in a pencil-sharpener, of a frame or standard, a shaft, *f*, adapted to bearings therein, and a cutter, *D*, and abrading-disk secured to and turning with said shaft, as set forth.

2. The combination of the frame or standard, the shaft *f*, its cutter *D*, and the pencil-support *w*, concentric with the cutter, as specified.

3. The combination of the standard *A*, having a lug, *s*, the stem *H*, having a recessed bar, *w*, slot *q*, and groove *t*, and the confining-bolt *q*, as described.

4. The combination of the standard *A*, the tubular shaft *f*, and the cutter *D*, having a tubular threaded stem, *m*, adapted to said tubular shaft, as set forth.

5. The combination of the standard *A*, the shaft *f*, having a disk, *B*, the abrading-disk

*F*, and the cutter *D*, having a screw-stem, *m*, adapted to an opening in the end of the shaft *f*, and a shoulder, *n*, whereby the disk *F* is confined to the disk *B*, as specified.

6. The combination of the standard *A*, the shaft *f*, having an abrading-disk, *F*, and the bar *G*, located in front of said disk and bent at the lower end so as to form a pencil-support and overlap the edge of the disk to serve as a guard, as set forth.

7. The combination of the standard *A*, the shaft *f*, having an abrading-disk, *F*, and the bar *G*, forming a pencil support and guard, and having formed on it a pencil-guide, *p*, adjacent to the flat face of the disk, as set forth.

8. The combination of the standard *A*, the shaft *f*, having a disk with a flat abrading side, and the pencil-support *p*, adjustable from and toward the flat face of the disk in a course at right angles to said face, as set forth.

9. The combination of the cutter *D* with the knife *g* and the adjusting and locking screws *h* and *i*, as specified.

10. The combination of the standard having lugs *y*, the shaft *f*, having a cutter, *D*, and the tray *M*, having hooks *x*, whereby it is suspended from the lugs *y*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HELEN A. BLANCHARD.

Witnesses:

JOHN M. CLAYTON,  
HARRY SMITH.